

## CLAIMS

- 1     1.     Apparatus comprising  
2             a connector configured for insertion and removal of a  
3     digital device, the connector having contacts arranged to make  
4     electrical connection to conductors on the digital device while the  
5     digital device is inserted in the connector, and  
6             a first electromagnetic coupler connected to at least one of  
7     the contacts of the connector, the electromagnetic coupler being  
8     configured for electromagnetic coupling at an interface to a second  
9     electromagnetic coupler that is connected to a communication bus.
- 1     2.     The apparatus of claim 1 in which the connector comprises  
2     a socket.
- 1     3.     The apparatus of claim 2 in which the socket is configured  
2     to receive a memory card.
- 1     4.     The apparatus of claim 1 in which the contacts comprise  
2     spring contacts.
- 1     5.     The apparatus of claim 1 in which the contacts are  
2     configured to carry signals.
- 1     6.     The apparatus of claim 1 in which the digital device  
2     comprises a memory card.

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- 1 7. The apparatus of claim 1 in which the digital device  
2 comprises an I/O card.
- 1 8. The apparatus of claim 1 in which the connector comprises  
2 a rigid coupling element, and the first electromagnetic coupler is  
3 formed on a surface of the rigid coupling element.
- 1 9. The apparatus of claim 8 in which the connector comprises  
2 a socket body having a slot configured to receive the digital device  
3 and a cavity to receive the rigid coupling element.
- 1 10. The apparatus of claim 9 in which the connector comprises  
2 a spacer that defines a fixed distance between a wall of the cavity  
3 and the rigid coupling element.
- 1 11. The apparatus of claim 1 also including a viscous liquid on  
2 the first electromagnetic coupler.
- 1 12. The apparatus of claim 8 in which the contacts of the  
2 connector are soldered to pads on a surface of the rigid coupling  
3 element, and the pads are electrically connected to the first  
4 electromagnetic coupler by vias in the rigid coupling element.
- 1 13. The apparatus of claim 8 in which the contacts of he  
2 connector are soldered to through holes in the rigid coupling  
3 element.
- 1 14. The apparatus of claim 8 in which the rigid coupling  
2 element comprises a core and metalization layers on two faces of  
3 the core.
- 1 15. The apparatus of claim 14 in which the rigid coupling  
2 element also includes solder masks on the metalization layers.

1 16. A system comprising  
 2 a circuit board,  
 3 a bus arranged on the circuit board,  
 4 electromagnetic couplers defined at locations along the bus,  
 5 sockets having electromagnetic couplers and contacts for  
 6 connection to contact pads of device boards, the sockets being  
 7 mounted to define interfaces across which electromagnetic  
 8 coupling of signals can occur between the electromagnetic  
 9 couplers defined along the bus and the electromagnetic couplers on  
 10 the sockets.

1 17. The system of claim 16 in which the sockets are mounted  
 2 on the board by pins.

1 18. The system of claim 16 in which each of the sockets has an  
 2 electromagnetic coupler for each of a set of signals carried by the  
 3 contacts of the sockets.

1 19. The system of claim 16 in which each of at least some of  
 2 the electromagnetic couplers have a zig-zag configuration.

1 20. The system of claim 16 also including a processor mounted  
 2 on the board and coupled to the bus.

1 21. A system comprising  
 2 a circuit board,  
 3 a bus arranged on the circuit board,

4 electromagnetic couplers defined at locations along the bus,  
5 sockets having electromagnetic couplers and contacts for  
6 connection to contact pads of device boards, the sockets being  
7 mounted to define interfaces across which electromagnetic  
8 coupling of signals can occur between the electromagnetic  
9 couplers defined along the bus and the electromagnetic couplers on  
10 the sockets, and  
11 device boards mounted in the sockets.

1 22. The system of claim 21 in which the device boards include  
2 memory devices or I/O devices.

1 23. A method comprising  
2 conducting digital signals along a bus,  
3 at locations along the bus, electromagnetically coupling the  
4 digital signals to sockets,  
5 within the sockets conducting the digital signals to  
6 contacts, and  
7 conducting the signals from the contacts to boards plugged  
8 into the sockets.

1 24. The method of claim 23 in which the signals comprise  
2 memory address and data signals.

1 25. A method comprising

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2 mounting sockets on a circuit board at locations of  
3 electromagnetic bus couplers, and  
4 populating the circuit board with components that include a  
5 processor coupled to a bus served by the electromagnetic bus  
6 couplers.

1 26. The method of claim 25 also including inserting digital  
2 devices into the sockets.

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